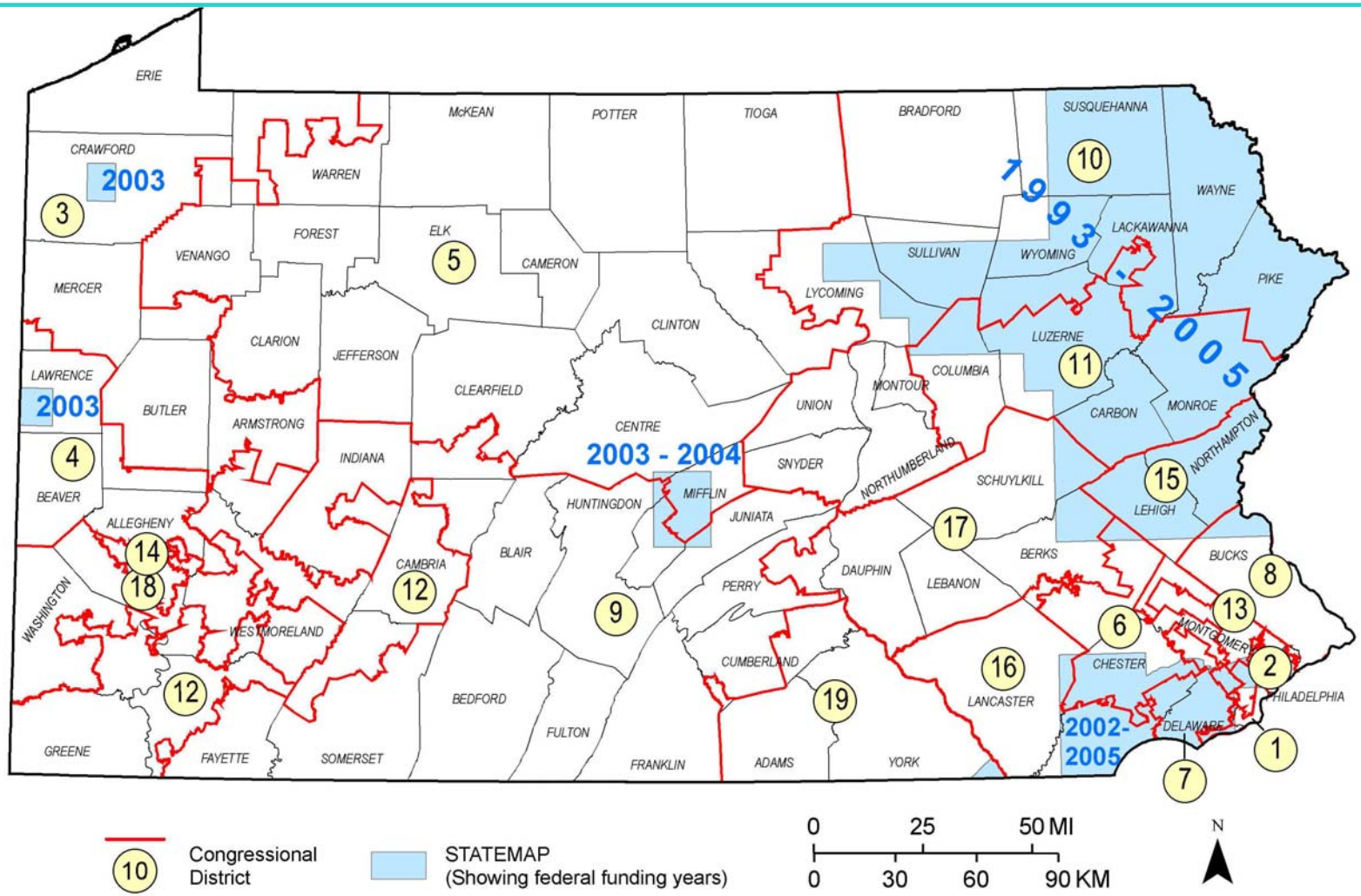
Association of American State Geologists

United States Geological Survey

National Cooperative Geologic Mapping Program

STATEMAP Component: States compete for federal matching funds for geologic mapping



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SUMMARY OF STATEMAP
GEOLOGIC MAPPING PROGRAM IN PENNSYLVANIA

Federal Fiscal Year	Project Title	State Dollars	Federal Dollars	Total Project Dollars
93	Surficial Geology of the Allentown 30 × 60 quadrangle	$40,182	$40,000	$80,182
94	Surficial Geology of the Allentown 30 × 60 quadrangle	$48,556	$40,000	$88,556
95	Surficial Geology of the Allentown 30 × 60 quadrangle	$56,974	$34,423	$91,397
96	Bedrock and Surficial Geology of the Scranton 30 × 60 quadrangle	$80,581	$75,489	$156,070
97	Bedrock and Surficial Geology of the Scranton 30 × 60 quadrangle	$132,616	$132,616	$265,232
98	Bedrock and Surficial Geology of the Scranton 30 × 60 quadrangle	$127,728	$122,458	$250,186
99	Bedrock and Surficial Geology of the Honesdale 30 × 60 quadrangle	$77,094	$75,000	$152,094
00	Bedrock and Surficial Geology of the Honesdale 30 × 60 quadrangle	$108,644	$108,415	$217,059
01	Bedrock and Surficial Geology of the Honesdale 30 × 60 quadrangle	$131,717	$131,444	$263,161
02	Bedrock Geology of Selected Quadrangles of Southeastern Pa.	$41,199	$40,339	$81,538
03	Surficial Geology of Selected Quadrangles in Northern Pa.; Bedrock Geology of Selected Quadrangles of Central and Southeastern Pa.	$115,605	$109,251	$224,856
04	Surficial Geology of Selected Quadrangles in Northeastern Pa.; Bedrock Geology of Selected Quadrangles of Central and Southeastern Pa.	$151,048	$108,928	$259,976
05	Surficial Geology of Selected Quadrangles in Northeastern Pa.; Bedrock Geology of Selected Quadrangles of Southeastern Pa.	$89,546	$ 60,333	$149,879
	TOTALS	$1,201,490	$1,078,696	$2,280,186

Pennsylvania has benefited from the National Cooperative Geologic Mapping Program (NCGMP) in several areas. In northeastern Pennsylvania, glaciers deposited abundant sands and gravels. These unconsolidated sediments deeply buried large areas of the layered sandstone bedrock. The area is now undergoing rapid development, putting pressure on groundwater and economic mineral resources. Until recently, adequate geologic data and maps have been lacking for this part of the state. Through NCGMP, nearly 36 geologic quadrangle reconnaissance maps (scale 1:24,000) of the surficial geology have been produced. An additional 43 quadrangle maps are being digitized from paper copies for a total of 79 quadrangle maps. The maps provide detailed basic information that is critical for local engineering studies, groundwater resource investigations, and effective land-use planning. Each map is accompanied by depth-to-bedrock data that are particularly useful in resource assessments and engineering studies.

Other mapping is continuing in western and central Pennsylvania. Four quadrangles were included from western Pennsylvania for surficial mapping of glacial deposits. In central Pennsylvania, new bedrock geologic mapping of four quadrangles in the Ridge and Valley physiographic province is nearing completion. NCGMP mapping has revealed additional structural and stratigraphic complexities in these rocks. Recently, exposure of acid rock has caused major problems for road construction projects in the central region of the state. Detailed geologic mapping is crucial for both prevention and mitigation of acid drainage.

Bedrock geology of all or part of 25 quadrangles is being mapped in the geologically complex sedimentary, metamorphic, and igneous terranes of southeastern Pennsylvania. This is another area of the state where geologic maps are inadequate and population pressure is high. NCGMP mapping is providing basic data for use in groundwater investigations, engineering studies, geologic hazard assessments, and land-use planning, as well as significant advances to our understanding of the geologic and tectonic history of the region.

July 2005